**Reactivity of metals with water**

**1)** Calcium and magnesium are Group 2 metals. Analyse the reactions these

metals have with cold water. In your answer include:

• observations you would make for both metals reacting with water

• any links these observations would have to the products formed in each

reaction

• an explanation of any similarities and differences in the reactivity of these

two metals in water

• a balanced symbol equation for ONE of these reactions.

**2)** Lithium and sodium are both Group 1 metals. Analyse the type of reaction that these metals have with water. In your answer include:

• observations of lithium and sodium reacting with water

• a word and balanced symbol equation of ONE of these reactions

• a comparison of the reactivity of lithium and sodium, with water.

**3)** The metals calcium and copper may react when put into water.

The table below gives the observations made when calcium and copper are put into water.

|  |  |
| --- | --- |
| **Metal** | **Reaction in water** |
| Copper | No reaction. |
| Calcium | Bubbles rapidly and heats the water up. |

Discuss the reactivities of calcium and copper metals. In your answer, you should:

identify the chemical products formed in any reactions

link the chemical products formed to the observations given in the table

write balanced equations for the reactions that occur

fully explain why calcium is placed before copper on the Activity Series (refer to the resource booklet).

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